

**IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF VIRGINIA**

VIRGINIA INNOVATION
SCIENCES, INC.,

Plaintiff,

v.

AMAZON.COM, INC.

Defendant.

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Civil Action No.

JURY TRIAL DEMANDED

COMPLAINT

Plaintiff Virginia Innovation Sciences, Inc. (“VIS”) files this Complaint against Amazon.com, Inc. (“Amazon” or “Defendant”), and hereby alleges as follows:

I. NATURE OF THE ACTION

1. This is a patent infringement action to end Defendant’s unauthorized and infringing manufacture, use, sale, offering for sale, and/or importation of methods and products incorporating Plaintiff VIS’s patented inventions.

2. VIS is owner of all right, title, and interest in and to U.S. Patent No. 9,729,918, entitled “A Method and System for Efficient Communication” (the ’918 patent)(Attached as Exhibit A).

3. Additionally, VIS is owner of all right, title, and interest in and to U.S. Patent No. 8,135,398, entitled “Method and Apparatus for Multimedia Communications with Different User Terminals” (the “’398 patent”)(Attached as Exhibit B).

4. VIS is also the owner of all right, title, and interest in and to U.S. Patent No. 9,369,844, entitled “System and Method for Providing Locally Applicable Internet Content with

Secure Action Requests and Item Condition Alerts” (the “’844 patent”)(Attached as Exhibit C).

5. VIS is also the owner of all right, title, and interest in and to U.S. Patent No. 9,723,443, entitled “System and Method for Providing Locally Applicable Internet Content with Secure Action Requests and Item Condition Alerts” (the “’443 patent”)(Attached as Exhibit D)..

6. The ’918 patent, the ’844 patent, the ’398 patent, and the ’443 patent are referred to herein as the “Asserted Patents.”

7. Defendant manufactures, provides, uses, sells, offers for sale, imports, and/or distributes infringing products and services; and encourages others to use its products and services in an infringing manner, including its customers. Plaintiff VIS seeks past and future damages and prejudgment and post-judgment interest for Amazon’s past infringement of the Asserted Patents.

II. THE PARTIES

8. Plaintiff Virginia Innovation Sciences is a corporation organized and existing under the laws of the State of Virginia, with its principal place of business located in this judicial district at 6301 Edsall Road, Suite 517, Alexandria, Virginia 22312.

9. Upon information and belief, Amazon is a corporation organized under the laws of the State of Delaware, with its principal place of business located at 410 Terry Avenue North, Seattle, Washington 98109. Upon information and belief, Defendant Amazon is authorized to do business in Virginia. Defendant Amazon may be served with process by serving its registered agent Corporation Service Company, 2711 Centerville Rd., Suite 400, Wilmington, Delaware 19808.

III. JURISDICTION AND VENUE

10. This is an action for patent infringement, which arises under the Patent Laws of

the United States, in particular, 35 U.S.C. §§ 271, 281, 283, 284, and 285. This Court has jurisdiction over the subject matter of this action under 28 U.S.C. §§1331 and 1338(a).

11. This Court has personal jurisdiction over Amazon, and venue is proper in this Court pursuant to 28 U.S.C. §§ 1391(b), (c), and 1400. This Court has personal jurisdiction over Amazon because, among other things, Amazon has one or more established places of business in this judicial district and has established minimum contacts within the forum such that the exercise of jurisdiction over Amazon will not offend traditional notions of fair play and substantial justice. For example, Amazon has placed products that practice and/or embody the claimed inventions of the Asserted Patents into the stream of commerce with the reasonable expectation and/or knowledge that purchasers and users of such products were located within this district. In addition, Amazon has sold, advertised, marketed, and distributed products in this district that practice the claimed inventions of the Asserted Patents. Amazon derives substantial revenue from the sale of infringing products distributed within the district, and/or expects or should reasonably expect its actions to have consequences within the District, and derives substantial revenue from interstate and international commerce.

IV. PLAINTIFF'S PATENTS

A. The '398 Patent

12. The '398 Patent was filed on May 6, 2011 and issued on March 13, 2012. The '398 Patent generally discloses multimedia communications with cross-layer optimization in multimedia communications with different user terminals. Various optimization for the delivery of multimedia content across different channels are provided concurrently to a plurality of user terminals.

13. The '398 Patent embodies several key advancements over technology that was conventional at the time of its applicable priority date. By way of example, claims 15 and 59 of the '398 Patent reads as follows:

15. A wireless terminal apparatus for converting and sending of content to devices, the apparatus comprising:

a processor; and

a memory, the memory storing program code executable by a processor to perform operations comprising:

receiving a multimedia content item originated from a source located outside a designated location and destined for a destination device located within the designated location, wherein the multimedia content item is received through a wireless communication network by the wireless terminal apparatus;

converting the multimedia content item for reproduction according to a determined signal format of the destination device; and

sending the converted multimedia content item to the destination device, wherein the destination device is a television, and wherein the sending comprises:

establishing a predetermined channel operatively in communication with the destination device,

and transporting the multimedia content item to the destination device via said predetermined channel,

for the destination device to display the multimedia content item in conjunction with a navigational command to the destination device for the predetermined channel.

59. The wireless terminal apparatus of claim 15, wherein the wireless communication network is a cellular communication network.

B. The '844 patent

14. The '844 Patent was filed on September 2, 2014 and issued on June 14, 2016. The asserted claims of the '844 patent generally discloses a wireless device configured to facilitate electronic communication. The device communicates an item status signal wirelessly in connection with initiation of replenishment of a household inventory of corresponding

merchandise through a purchase transaction. A wireless transmission channel is established and information pertaining to a user account is accessed to complete the purchase transaction. The '844 patent embodies several key advancements over technology that was conventional at the time of its applicable priority date. By way of example, claim 35 of the '844 Patent reads as follows:

35. A system for facilitating electronic communication of secure information, the system comprising:

- at least one database configured to store information of a user account associated with a wireless signal transmitter,

- wherein the wireless signal transmitter is designated to transmit an item status signal to provide information regarding an updated condition of a merchandise;

- wherein the item status signal is transmitted through a wireless communication channel from the wireless signal transmitter; the wireless communication channel being established in a local wireless communication network in response to an indication of the updated condition, the wireless communication channel being established for transmission of the item status signal from the wireless signal transmitter;

- wherein the system is configured to recognize a unique identifier corresponding to the wireless signal transmitter based on a successful transmission of the item status signal;

- wherein the system is further configured to identify a purchase request for the merchandise based on recognition of the unique identifier corresponding to the wireless signal transmitter;

- wherein the information of the user account comprises information for a processing of the purchase request; and

- at least one output interface configured to communicate the information for the processing of the purchase request through a communication channel to accommodate a completion of the processing of the purchase request, the communication channel being separate from the wireless communication channel established for the transmission of the item status signal; and

- wherein the system is configured to update the user account with confirmation information regarding the processing of the purchase request.

C. The '443 patent

15. The '443 Patent was filed on May 17, 2016 and issued on August 1, 2017. The asserted claims of the '443 patent generally disclose a wireless device configured to facilitate electronic communication. The device communicates an item status signal wirelessly in connection with initiation of replenishment of a household inventory of corresponding merchandise through a purchase transaction. A wireless transmission channel is established and information pertaining to a user account is accessed to complete the purchase transaction. The '443 patent embodies several key advancements over technology that was conventional at the time of its applicable priority date. By way of example, claim 1 of the '443 Patent reads as follows:

1. A system for facilitating electronic communications, the system comprising:

a central controller;

a memory; and

a wireless transmitter configured to transmit, through a wireless transmission channel, an item status signal in connection with an initiation of an increase of a household inventory of an item, the wireless transmission channel being established for transmission of the item status signal in a local wireless communication network in response to an indication of an updated status of the item;

wherein the memory is configured to store a unique identifier for the item and information related with the household inventory of the item, the information related with the household inventory of the item including a purchase requirement of the item;

wherein the wireless transmitter is designated to transmit the item status signal;

wherein the central controller is configured to receive information regarding the item status signal and identify the item in connection with a successful transmission of the item status signal from the wireless transmitter;

wherein the wireless transmitter is associated with the item;

wherein the information regarding the item status signal comprises information for the unique identifier for the item;

wherein the central controller is further configured to identify the item is based on recognition of the unique identifier of the item stored in the memory;

wherein the central controller is further configured to perform a processing of a purchase request for the item to increase the household inventory of the item in connection with identification of the item;

wherein the central controller is further configured to communicate information for the processing of the purchase request through a network communication channel to complete the processing of the purchase request, the network communication channel being separate from the wireless transmission channel established for the transmission of the item status signal;

wherein the information for the processing of the purchase request comprises payment information for the purchase request for the item; and

wherein the central controller is configured to send confirmation information regarding the processing of the purchase request.

D. The '918 patent

16. The '918 Patent was filed on January 26, 2017 and issued on August 8, 2017. The asserted claims of the '918 patent generally disclose a wireless HUB in an intelligent management system. The '918 patent embodies several key advancements over technology that

was conventional at the time of its applicable priority date. By way of example, claim 33 of the '918 Patent reads as follows:

33 (New). A system comprising:

a management center system;

a wireless hub;

at least one mapping table configured to register a unique hub identifier of the wireless hub; and

at least one database configured to store user service profile information of a user account in the at least one mapping table,

wherein the at least one database is configured to store information regarding a household item associated with the user account, the information regarding the household item including household item status information for the household item, the information regarding the household item including a unique identifier for the household item;

wherein the wireless hub is configured to receive a request for a particular information content;

wherein the wireless hub is configured to send a data package to the management center system through a wireless communication network based on the request for the particular information content, the data package including information for the unique hub identifier;

wherein the management center system is configured to perform a processing of the data package;

wherein the processing of the data package comprises identifying the wireless hub based on recognition of the unique hub identifier registered in the at least one mapping table;

wherein the wireless hub is configured to receive the particular information content through the wireless communication network in connection with identification, by the management center system, of the wireless hub;

wherein the wireless hub is configured to perform a conversion of a corresponding signal of the particular information content to accommodate production of the particular information content;

wherein the corresponding signal comprises a compressed signal;

wherein the wireless hub is configured to decompress the compressed signal to a decompressed signal;

wherein the wireless hub is further configured to communicate information about an updated status of the household item in conjunction with a short range wireless communication regarding the updated status; and

wherein, in connection with recognition, by the system, of information for the unique identifier for the household item associated with the short range wireless communication, the system is configured to update the household item status information for the household item corresponding to the updated status of the household item.

V. DEFENDANT'S ACTS

A. '918 Patent

17. Amazon has infringed and continues to infringe the '918 patent by making, selling, offering for sale, importing, and using products and software in an infringing manner, including but not limited to Amazon's Fire TV and Fire Stick devices, mobile phone, and tablet products, Amazon Echo series (Dot, Tap, Show, Look, Echo) as well as any other products operating in a substantially similar manner, including but not limited to: Amazon Kindle Fire HD

8.9; Amazon Fire HDX 8.9; Amazon Fire HD 10, Amazon Fire HDX 8.9; Amazon Fire HD Kids Edition; Amazon Fire HD6; Amazon Fire HD 7; Amazon Fire HD 6; Amazon Fire Phone; Amazon Fire TV 1st Gen; Amazon Fire TV 2nd Gen; Amazon Fire TV Gaming Edition; and Amazon Fire Stick, Amazon Echo series, and similar products.

18. Moreover, Amazon provides its customers with the accused products and software and instructs its customers to use the products and software in an infringing manner. Examples of such instructions provided by Amazon include a video located at:

https://www.amazon.com/dp/B01J24C0TI/ref=fs_ods_kt

<https://www.amazon.com/Amazon-Echo-Bluetooth-Speaker-with-WiFi-Alexa/dp/B00X4WHP5E>

<https://www.amazon.com/All-New-Amazon-Echo-Dot-Add-Alexa-To-Any-Room/dp/B01DFKC2SO>

<https://developer.amazon.com/devices>

https://www.amazon.com/dp/B072R2WMSD/ref=fs_ods_kt?th=1

<https://developer.amazon.com/alexa>

<https://developer.amazon.com/blogs/alexa/post/78f44d51-5bdf-4a4c-8eaa-57d1282c8212/introducing-entertainment-capabilities-in-alexa-smart-home-new-device-controls-for-tvs-av-receivers-and-ir-hubs>

<https://aws.amazon.com>

<https://developer.amazon.com/alexa-skills-kit>

<https://developer.amazon.com/blogs/appstore/post/e1cf1cbc-0e2d-4d31-a33b-694d87fdde2f/introducing-the-all-new-amazon-fire-7-and-fire-hd-8-with-amazon-alexa>

<https://developer.amazon.com/amazon-tap>

<https://developer.amazon.com/public/support/faq#alexa>

<http://www.amazon.com/gp/help/customer/display.html?nodeId=201540250>

<http://www.amazon.com/gp/help/customer/display.html?nodeId=201370390>

<https://developer.amazon.com/services-and-apis>

<https://developer.amazon.com/public/solutions/platforms/webapps/docs/fire-tv-web-app-faq>

<https://developer.amazon.com/echo-show>

	 Echo Dot	 Amazon Echo	 Echo Show
Price	From: \$49.99	From: \$179.99	From: \$229.99
Overview	Add Alexa to any room in the house. Can connect to your speakers over Bluetooth or 3.5 mm stereo cable.	Hands-free Alexa-enabled speaker that fills any room with immersive 360° audio.	Everything you love about Alexa and now she can show you things.
Voice control	Far-field (hands-free) voice recognition. Just ask.	Far-field (hands-free) voice recognition. Just ask.	Far-field (hands-free) voice recognition. Just ask.
Alexa calling and messaging	Call or message anyone with an Echo, Echo Dot, Echo Show, or the Alexa App.	Call or message anyone with an Echo, Echo Dot, Echo Show, or the Alexa App.	Live video visits and messaging between Echo Show devices or the Alexa App. Call or message anyone with a supported Echo device or the Alexa App.
Audio	Built-in speaker and support for connectivity to external speakers or headphones.	Fills the room with immersive, 360° omni-directional audio; separate woofer and tweeter for deep bass and crisp high notes.	Expansive, stereo sound powered by Dolby; dual full-range speakers for rich bass and balanced listening.
Wi-Fi music	Amazon Music, Spotify, Pandora, TuneIn, iHeartRadio, and more.	Amazon Music, Spotify, Pandora, TuneIn, iHeartRadio, and more.	Amazon Music, Spotify, Pandora, TuneIn, iHeartRadio, and more.
Bluetooth & Wi-Fi	Bluetooth-enabled to stream music to or from connected devices; Dual-band Wi-Fi supports 2.4 and 5 GHz networks	Bluetooth-enabled to stream music to or from connected devices; Dual-band Wi-Fi supports 2.4 and 5 GHz networks	Bluetooth-enabled to stream music to or from connected devices; Dual-band Wi-Fi supports 2.4 and 5 GHz networks

<https://www.amazon.com/All-New-Alexa-Echo-Dot-Add-Alexa-To-Any-Room/dp/B01DFKC2SO>

19. In addition, Amazon knowingly, actively induced and continues to knowingly actively induce (or is willfully blind to the) infringement of the '918 patent within this district by making, using, offering for sale, and selling infringing products, as well as by contracting with others to use, market, sell, and offer to sell infringing products, all with knowledge of the '918

patent, and their claims, with knowledge that their customers will use, market, sell, and offer to sell infringing products in this district and elsewhere in the United States, and with the knowledge and specific intent to encourage and facilitate infringing sales and use of the products by others within this district and the United States by creating and disseminating promotional and marketing materials, instructional materials, and product manuals, and technical materials related to the infringing products.

20. Moreover, Amazon knowingly contributed to the infringement of the '918 patent by others in this district, and continues to contribute to the infringement of the '918 patent by others in this district by selling or offering to sell components of infringing products in this district, which components constitute a material part of the inventions of the '918 patent, knowing of the Patents and their claims, knowing those components to be especially made or especially adapted for use to infringe the '918 Patent, and knowing that those components are not staple articles or commodities of commerce suitable for substantial non-infringing use. Amazon has not implemented a design around or otherwise taken any remedial action with respect to the '918 patent. VIS will rely on a reasonable opportunity for discovery of evidentiary information regarding additional infringing products.

B. The '398 Patent

21. Upon information and belief, Amazon has infringed and continues to infringe the '398 Patent by making, selling, offering for sale, importing, and using products and software in an infringing manner, including but not limited to Amazon Kindle Fire HD 8.9; Amazon Fire HDX 8.9; Amazon Fire HD 10, Amazon Fire HDX 8.9; Amazon Fire HD Kids Edition; Amazon Fire HD 6; Amazon Fire HD 7; Amazon Fire Phone, as well as any other products operating in a substantially similar manner. <https://www.amazon.com/Amazon-Fire-Tablet->

Family/b?ie=UTF8&node=6669703011 and <https://www.amazon.com/Best-Sellers-Electronics-Computer-Tablets/zgbs/electronics/1232597011>.

22. In addition, Amazon knowingly, actively induced and continues to knowingly actively induce (or is willfully blind to the) infringement of the '398 Patent within this district by making, using, offering for sale, and selling infringing products, as well as by contracting with others to use, market, sell, and offer to sell infringing products, all with knowledge of the '398 Patent, and their claims, with knowledge that their customers will use, market, sell, and offer to sell infringing products in this district and elsewhere in the United States, and with the knowledge and specific intent to encourage and facilitate infringing sales and use of the products by others within this district and the United States by creating and disseminating promotional and marketing materials, instructional materials, and product manuals, and technical materials related to the infringing products.

23. Moreover, Amazon knowingly contributed to the infringement of the '398 Patent by others in this district, and continues to contribute to the infringement of the '398 Patent by others in this district by selling or offering to sell components of infringing products in this district, which components constitute a material part of the inventions of the '398 Patent, knowing of the Patent and its claims, knowing those components to be especially made or especially adapted for use to infringe the '398 Patent, and knowing that those components are not staple articles or commodities of commerce suitable for substantial non-infringing use. Amazon has not implemented a design around or otherwise taken any remedial action with respect to the '398 Patent. VIS will rely on a reasonable opportunity for discovery of evidentiary information regarding additional infringing products.

C. The '443 patent

24. Amazon has infringed and continues to infringe the '443 patent by making, selling, offering for sale, importing, and using products and software in an infringing manner, including but not limited to Amazon's Dash Button, Dash Replenishment as well as any other products operating in a substantially similar manner. Amazon's Dash Button is a Wi-Fi enabled device that allows Amazon's customers to reorder household items with the press of a button. See <https://www.amazon.com/gp/help/customer/display.html?nodeId=201746300>.

25. Moreover, Amazon provides its customers with the accused products and software and instructs its customers to use the products and software in an infringing manner, including through its website at https://www.amazon.com/gp/help/customer/display.html/ref=amb_link_464330362_2?ie=UTF8&nodeId=201706050&pf_rd_m=ATVPDKIKX0DER&pf_rd_s=merchandised-search-leftnav&pf_rd_r=ZAKRJ9XZJS6HWQYFCB0&pf_rd_t=101&pf_rd_p=2531000162&pf_rd_i=10667898011 (Support for Amazon Dash Button).

Amazon Device Support › Dash Button Help › Using Dash Button›

Place an Order with Your Dash Button

Reorder your favorite home essential at any time with the press of a button. Before you can place an order, make sure you've set up your Dash Button. To learn more, go to Set Up Your Dash Button. To place an order, press and release the button on your Dash Button.

Tip: Do not press and hold the button or it may go into Wi-Fi setup mode. A quick press and release of the button is all you need to place an order.

The indicator light on your button will blink white while the order is processing.

- If the order is successful, the indicator light turns a solid green for five seconds.
- If the order is unsuccessful, the indicator light turns a solid red for five seconds.

If you opt-in to receive notifications for your Dash Button orders, a confirmation notification will be displayed in the Amazon Shopping app on your phone. To learn how to enable Dash Button notifications, go to Manage Your Dash Button Settings.

<https://www.amazon.com/gp/help/customer/display.html?nodeId=201746380> (Place an Order with Your Dash Button); *See also* <https://www.amazon.com/gp/help/customer/display.html?nodeId=201746340> (Set Up Your Dash Button); <https://www.amazon.com/gp/help/customer/display.html?nodeId=201730790> (Manage Your Dash Button Settings).

26. In addition, Amazon knowingly, actively induced and continues to knowingly actively induce (or is willfully blind to the) infringement of the '443 patent within this district by making, using, offering for sale, and selling infringing products, as well as by contracting with others to use, market, sell, and offer to sell infringing products, all with knowledge of the '443 patent, and their claims, with knowledge that their customers will use, market, sell, and offer to sell infringing products in this district and elsewhere in the United States, and with the knowledge and specific intent to encourage and facilitate infringing sales and use of the products by others within this district and the United States by creating and disseminating promotional and marketing materials, instructional materials, and product manuals, and technical materials related to the infringing products.

27. Moreover, Amazon knowingly contributed to the infringement of the '443 patent by others in this district, and continues to contribute to the infringement of the '443 patent by others in this district by selling or offering to sell components of infringing products in this district, which components constitute a material part of the inventions of the '443 patent, knowing of the '443 patent and its claims, knowing those components to be especially made or especially adapted for use to infringe the '443 patent, and knowing that those components are not

staple articles or commodities of commerce suitable for substantial non-infringing use. Amazon has not implemented a design around or otherwise taken any remedial action with respect to the '443 patent. VIS will rely on a reasonable opportunity for discovery of evidentiary information regarding additional infringing products.

D. The '844 patent

28. Upon information and belief, Amazon has infringed and continues to infringe the '844 patent by making, selling, offering for sale, importing, and using products and software in an infringing manner, including but not limited to Amazon's Dash Replenishment. Amazon's Dash Replenishment enables connected devices to order physical goods from Amazon when supplies are running low. See <https://developer.amazon.com/dash-replenishment-service>.

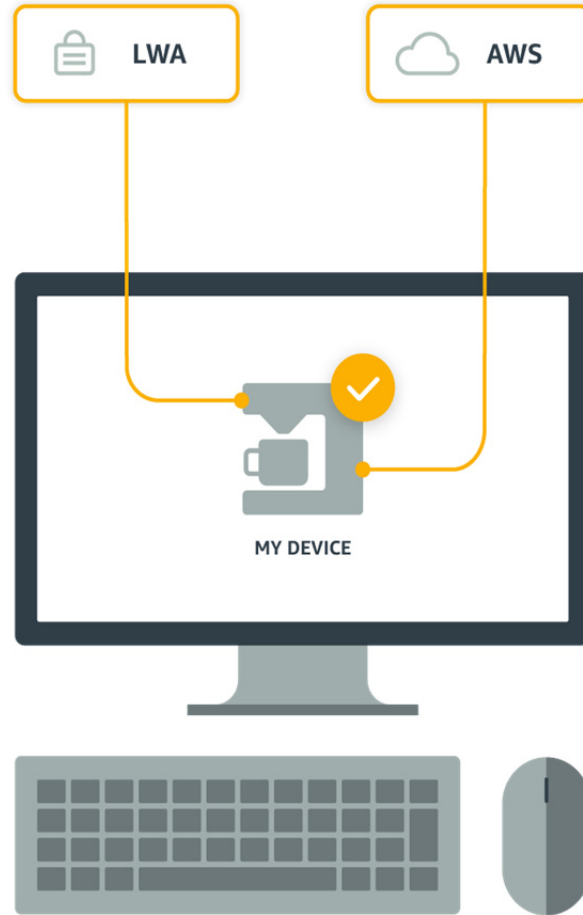
29. Moreover, Amazon provides its customers with the accused products and software and instructs its customers to use the products and software in an infringing manner, including through its website at <https://developer.amazon.com/dash-replenishment-service/getting-started>.

What do I need to get started using DRS?

In addition to understanding what makes a great DRS device, there are a few other things that you need to setup and understand to get started using DRS. ☐ ☐ Login With Amazon - You will need to create a Login With Amazon (LWA) account and register your application. LWA allows customers to use their amazon account credentials to register for DRS. LWA has an SDK, making it easy to integrate into your website, iOS, or Android application. ☐

Amazon Simple Notification Service – DRS uses Amazon Simple Notification Service (SNS) to send order updates and status information for your replenishment requests. Configuring SNS is easy, you can use the AWS Management Console to be able to quickly create a Topic and setup permissions so that we know where to send your notifications. ☐ ☐ Finally you should think about the products you want your device to reorder and how to structure them for your customer. Please read more about ASINs and slots below.

If you are ready to create your device click here for the Device Wizard



30. In addition, Amazon knowingly, actively induced and continues to knowingly actively induce (or is willfully blind to the) infringement of the '844 patent within this district by making, using, offering for sale, and selling infringing products, as well as by contracting with others to use, market, sell, and offer to sell infringing products, all with knowledge of the '844 patent, and their claims, with knowledge that their customers will use, market, sell, and offer to sell infringing products in this district and elsewhere in the United States, and with the knowledge and specific intent to encourage and facilitate infringing sales and use of the products by others within this district and the United States by creating and disseminating promotional and marketing materials, instructional materials, and product manuals, and technical materials

related to the infringing products.

31. Moreover, Amazon knowingly contributed to the infringement of the '844 patent by others in this district, and continues to contribute to the infringement of the '844 patent by others in this district by selling or offering to sell components of infringing products in this district, which components constitute a material part of the inventions of the '844 patent, knowing of the '844 patent and its claims, knowing those components to be especially made or especially adapted for use to infringe the '844 patent, and knowing that those components are not staple articles or commodities of commerce suitable for substantial non-infringing use. Amazon has not implemented a design around or otherwise taken any remedial action with respect to the '844 patent. VIS will rely on a reasonable opportunity for discovery of evidentiary information regarding additional infringing products.

V. CLAIMS

COUNT ONE

PATENT INFRINGEMENT – U.S. PATENT NO. 8,135,398

32. The VIS realleges and incorporates herein paragraphs 1 - 31.

33. Plaintiff VIS is the assignee of the '398 patent, entitled "Method and Apparatus for Multimedia Communications with Different User Terminals," and holds all substantial rights in the same. Among other rights, Plaintiff VIS maintains the exclusive right to exclude others, the exclusive right to enforce, sue and recover damages for past and future infringements, and the exclusive right to settle any claims of infringement.

34. The identified claims of the '398 patent are valid, enforceable and were duly issued in full compliance with Title 35 of the United States Code.

DIRECT INFRINGEMENT (35 U.S.C. § 271(a))

35. Amazon has directly infringed, and continues to directly infringe, one or more claims of the '398 patent in this judicial district and elsewhere in Virginia and the United States.

36. In particular, Amazon has directly infringed, and continues to directly infringe at least one of more of claims 59, and 64 of the '398 patent by, among other things, making, using, offering for sale, selling, and/or importing devices that are capable of receiving a multimedia content item and providing a converted multimedia content item for reproduction on a television. e.g., Amazon Fire Phone, Amazon HDX, Amazon Fire HD8, Fire HD7, Amazon Fire HD7 Kids Edition, Amazon Fire HD8 Kids Edition, Fire HD6, and/or Fire HD10, and similar products.

INDIRECT INFRINGEMENT (INDUCEMENT - 35 U.S.C. § 271(b))

37. Based on the information presently available to VIS, VIS contends that Amazon has indirectly infringed, and continues to indirectly infringe, at least one or more of claim 59 and claim 64 of the '398 patent by inducing direct infringement by third parties, including without limitation end users of the products accused of infringing the '398 patent ("the '398 Accused Products"), in this District and elsewhere in the United States.

38. On information and belief, despite having knowledge of the '398 patent, Amazon has specifically intended for persons who acquire and use the '398 Accused Products, including without limitation of end-users of the '398 Accused Products, to acquire and use such devices in such a way that infringes at least one of more of claims 59 and 64 thereof of the '398 patent and Amazon knew or should have known that their actions were inducing infringement.

39. Defendant has had knowledge of the '398 patent and the infringing nature of their activities at least as early the date when VIS effected service of the original Complaint in Civil Action No. 16-cv-0861 (E.D. Va.).

40. Direct infringement is the result of activities performed by third parties in relation

to the '398 Accused Products, including without limitation by end users enabled and encouraged by Amazon to use the '398 Accused Products in their normal, customary way to infringe the '398 patent.

41. With knowledge of the '398 patent, Amazon directs and aids third parties, including without limitation end-users of the '398 Accused Products, to infringe the '398 patent by, among other things, (i) enabling a user of the '398 Accused Products to use the products to receive multimedia content items and send converted content items for reproduction on a television, as claimed in the '398 patent; (ii) providing instructions (including, by way of example, the tutorials, user guides, product guides, help library, and other documentation) to end-users of the '398 Accused Products for using the products in their customary way; (iii) advertising the '398 Accused Products' support of receiving multimedia content items and sending converted multimedia content items for reproduction on a television; and (iv) providing to third parties the products and software and related equipment that may be required for or associated with infringement of the '398 patent, all with knowledge that the induced acts constitute patent infringement. Amazon possesses specific intent to encourage infringement by third parties, including without limitation end-users of the '398 Accused Products.

INDIRECT INFRINGEMENT (CONTRIBUTION - 35 U.S.C. §§ 271(c) and/or (f))

42. Based on the information presently available to VIS, VIS contends that Amazon has indirectly infringed, and continues to indirectly infringe at least one or more of claims 59 and 64 of the '398 patent by contributing to the infringement of the '398 patent under 35 U.S.C. § 271(c) and/or 271(f), either literally and/or under the doctrine of equivalents, by selling, offering for sale, and/or importing into the United States, the '398 Accused Products.

43. The '398 Accused Products are capable of receiving multimedia content items

and sending converted content items for reproduction on a television. Amazon knows that the '398 Accused Products (i) constitute a material part of the inventions claimed in the '398 patent; (ii) are especially made or adapted to infringe the '398 patent; (iii) are not staple articles or commodities of commerce suitable for non-infringing use; and (iv) are components used for or in systems that receive multimedia content items and send converted multimedia content items for reproduction on a television, as claimed in the '398 patent.

44. VIS is informed and believes that Amazon intends to and will continue to directly and indirectly infringe the '398 patent. VIS has been damaged as a result of Amazon's infringing conduct described in this Count. Amazon is, thus, liable to VIS in an amount that adequately compensates VIS for its infringement, which, by law, cannot be less than a reasonable royalty, together with interest and costs as fixed by this Court under 35 U.S.C. § 284.

COUNT TWO
PATENT INFRINGEMENT – U.S. PATENT NO. 9,729,918

45. The VIS realleges and incorporates herein paragraphs 1 - 44.

46. Plaintiff VIS is the assignee of the '918 patent, entitled "A Method and System for Efficient Communication" and holds all substantial rights in the same. Among other rights, Plaintiff VIS maintains the exclusive right to exclude others, the exclusive right to enforce, sue and recover damages for past and future infringements, and the exclusive right to settle any claims of infringement.

47. The identified claims of the '918 patent are valid, enforceable and were duly issued in full compliance with Title 35 of the United States Code.

DIRECT INFRINGEMENT (35 U.S.C. § 271(a))

48. Amazon has directly infringed, and continues to directly infringe, one or more claims of the '918 patent in this judicial district and elsewhere in Virginia and the United States.

49. In particular, Amazon has directly infringed, and continues to directly infringe at least one or more of independent claims 1, 9, and/or 99 and certain dependents thereof of the '918 patent by, among other things, making, using, offering for sale, selling, and/or importing devices and that are capable of receiving multimedia signals and sending encoded signals for reproduction of corresponding multimedia content on an alternative display device. Such devices include, but are not limited to, Amazon Kindle Fire HD 8.9, Amazon Fire TV 1st Gen, Amazon Fire TV 2nd Gen, Amazon Fire TV Gaming Edition, Amazon Fire Stick, 1st Gen, and 2nd Gen, Amazon HDX, Amazon Fire HD 8, Fire HD 7, Amazon Fire HD 7 Kids Edition, Amazon Fire HD 8 Kids Edition, Fire HD 10, and/or Fire HD 6 and all reasonably similar products of Amazon.

50. Further, Amazon has directly infringed, and continues to directly infringe at least one of more of independent claims 33, 116, 122, 128, and/or 135 and certain dependent claims thereof of the '918 patent by, among other things, making, using, offering for sale, selling, and/or importing devices of an intelligent home management system. Such devices include, but are not limited to, Amazon Echo series (including Dot, Look, Tap, Show, Echo (Hub)), Amazon Kindle Fire HD 8.9, Amazon Fire TV 1st Gen, Amazon Fire TV 2nd Gen, Amazon Fire TV Gaming Edition, Amazon Fire Stick, 1st Gen, and 2nd Gen, Amazon HDX, Amazon Fire HD8, Fire HD7, Amazon Fire HD7 Kids Edition, Amazon Fire HD8 Kids Edition, Fire HD10, and/or Fire HD 6 and all reasonably similar products of Amazon.

INDIRECT INFRINGEMENT (INDUCEMENT - 35 U.S.C. § 271(b))

51. Based on the information presently available to VIS, VIS contends that Amazon has indirectly infringed, and continues to indirectly infringe, at least one or more claims of the '918 patent by inducing direct infringement by third parties, including without limitation end users of the products accused of infringing the '918 patent ("the '918 Accused Products"), in this District and elsewhere in the United States.

52. On information and belief, despite having knowledge of the '918 patent, Amazon has specifically intended for persons who acquire and use the '918 Accused Products, including without limitation end-users of the '918 Accused Products, to acquire and use such devices in such a way that infringes at least one or more independent claims 1, 9, 99, 33, 116, 122, 128, and 135 and certain dependents thereof of the '918 patent and Amazon knew or should have known that their actions were inducing infringement.

53. Defendant has had knowledge of the '918 patent and the infringing nature of their activities at least as early the date when VIS effected service of the Complaint.

54. Direct infringement is the result of activities performed by third parties in relation to the '918 Accused Products, including without limitation to end users enabled and encouraged by Amazon to use the '918 Accused Products in their normal, customary way to infringe the '918 patent.

55. With knowledge of the '918 patent, Amazon directs and aids third parties, including without limitation end-users of the '918 Accused Products, to infringe the '918 patent by, among other things, (i) enabling a user of the '918 Accused Products to use the products to receive multimedia signals and send encodes signals for reproduction of corresponding multimedia content on a high definition digital television, as claimed in the '918 patent; (ii)

providing instructions (including, by way of example, the tutorials, user guides, product guides, help library, and other documentation) to end-users of the '918 Accused Products for using the products in their customary way; (iii) advertising the '918 Accused Products' support of receiving multimedia signals and sending encoded signals for reproduction of corresponding multimedia content on a high definition digital television; and (iv) providing to third parties the products and software and related equipment that may be required for or associated with infringement of the '918 patent, all with knowledge that the induced acts constitute patent infringement. Amazon possesses specific intent to encourage infringement by third parties, including without limitation end-users of the '918 Accused Products.

INDIRECT INFRINGEMENT (CONTRIBUTION - 35 U.S.C. §§ 271(c) and/or (f))

56. Based on the information presently available to VIS, VIS contends that Amazon has indirectly infringed, and continues to indirectly infringe a at least one or more of independent claims 1, 9, 99, 33, 116, 122, 128, and 135 and certain dependents thereof of the '918 patent by contributing to the infringement of the '918 patent under 35 U.S.C. § 271(c) and/or 271(f), either literally and/or under the doctrine of equivalents, by selling, offering for sale, and/or importing into the United States, the '918 Accused Products.

57. The '918 Accused Products are capable of receiving multimedia signals and sending encoded signals for reproduction on an alternative display device. Amazon knows that the '918 Accused Products (i) constitute a material part of the inventions claimed in the '918 patent; (ii) are especially made or adapted to infringe the '918 patent; (iii) are not staple articles or commodities of commerce suitable for non-infringing use; and (iv) are components used for or in systems that receive multimedia signals and send encoded signals for reproduction on a destination display device, as claimed in the '918 patent.

58. VIS is informed and believes that Amazon intends to and will continue to directly and indirectly infringe the '918 patent. VIS has been damaged as a result of Amazon's infringing conduct described in this Count. Amazon is, thus, liable to VIS in an amount that adequately compensates VIS for its infringement, which, by law, cannot be less than a reasonable royalty, together with interest and costs as fixed by this Court under 35 U.S.C. § 284.

COUNT THREE
PATENT INFRINGEMENT – U.S. PATENT NO. 9,369,844

59. Plaintiff VIS realleges and incorporates herein paragraphs 1 - 58.

60. Plaintiff VIS is the assignee of the '844 patent, entitled "System and Method for Providing Locally Applicable Internet Content with Secure Action Requests and Item Condition Alerts," and holds all substantial rights in the same. Among other rights, Plaintiff VIS maintains the exclusive right to exclude others, the exclusive right to enforce, sue and recover damages for past and future infringements, and the exclusive right to settle any claims of infringement.

61. The identified claims of the '844 patent are valid, enforceable and were duly issued in full compliance with Title 35 of the United States Code.

DIRECT INFRINGEMENT (35 U.S.C. § 271(a))

62. Amazon has directly infringed, and continues to directly infringe, one or more claims of the '844 patent in this judicial district and elsewhere in Virginia and the United States.

63. In particular, Amazon has directly infringed, and continues to directly infringe at least one or more of claims 28, 35, and 52 and certain dependents thereof of the '844 patent by, among other things, making, using, offering for sale, selling, and/or importing the Amazon Dash Replenishment.

INDIRECT INFRINGEMENT (INDUCEMENT - 35 U.S.C. § 271(b))

64. Based on the information presently available to VIS, VIS contends that Amazon has indirectly infringed, and continues to indirectly infringe, at least one or more claims of the '844 patent by inducing direct infringement by third parties, including without limitation end users of the products accused of infringing the '844 patent ("the '844 Accused Products"), in this District and elsewhere in the United States.

65. On information and belief, despite having knowledge of the '844 patent, Amazon has specifically intended for persons who acquire and use the '844 Accused Products, including without limitation end-users of the '844 Accused Products, to acquire and use such devices in such a way that infringes at least one or more independent claim 28, 35, and 52 and certain dependents thereof of the '844 patent and Amazon knew or should have known that their actions were inducing infringement.

66. Defendant has had knowledge of the '844 patent and the infringing nature of their activities at least as early the date when VIS effected service of the original Complaint in Civil Action No. 16-cv-0861 (E.D. Va.).

67. Direct infringement is the result of activities performed by third parties in relation to the '844 Accused Products, including without limitation by end users enabled and encouraged by Amazon to use the '844 Accused Products in their normal, customary way to infringe the '844 patent.

68. With knowledge of the '844 patent, Amazon directs and aids third parties, including without limitation end-users of the '844 Accused Products, to infringe the '844 patent by, among other things, (i) enabling a user of the '844 Accused Products to wirelessly transmit a signal in connection with initiation of a household inventory replenishment of corresponding

merchandise, as claimed in the '844 patent; (ii) providing instructions (including, by way of example, the tutorials, user guides, product guides, help library, and other documentation) to end-users of the '844 Accused Products for using the products in their customary way; (iii) advertising the '844 Accused Products; and (iv) providing to third parties the products and software and related equipment that may be required for or associated with infringement of the '844 patent, all with knowledge that the induced acts constitute patent infringement. Amazon possesses specific intent to encourage infringement by third parties, including without limitation end-users of the '844 Accused Products.

INDIRECT INFRINGEMENT (CONTRIBUTION - 35 U.S.C. §§ 271(c) and/or (f))

69. Based on the information presently available to VIS, VIS contends that Amazon has indirectly infringed, and continues to indirectly infringe at least one or more of independent claims 28, 35, and/or 52 and certain dependents thereof of the '844 patent by contributing to the infringement of the '844 patent under 35 U.S.C. § 271(c) and/or 271(f), either literally and/or under the doctrine of equivalents, by selling, offering for sale, and/or importing into the United States, the '844 Accused Products.

70. The '844 Accused Products are capable of wirelessly transmitting a signal in connection with replenishment of a household inventory of corresponding merchandise. Amazon knows that the '844 Accused Products (i) constitute a material part of the inventions claimed in the '844 patent; (ii) are especially made or adapted to infringe the '844 patent; (iii) are not staple articles or commodities of commerce suitable for non-infringing use; and (iv) are components used for or in systems that wirelessly transmit a signal relating to replenishment of a household inventory of corresponding merchandise, as claimed in the '844 patent.

71. VIS is informed and believes that Amazon intends to and will continue to directly

and indirectly infringe the '844 patent. VIS has been damaged as a result of Amazon's infringing conduct described in this Count. Amazon is, thus, liable to VIS in an amount that adequately compensates VIS for its infringement, which, by law, cannot be less than a reasonable royalty, together with interest and costs as fixed by this Court under 35 U.S.C. § 284.

COUNT FOUR
PATENT INFRINGEMENT – U.S. PATENT NO. 9,723,443

72. Plaintiff VIS realleges and incorporates herein paragraphs 1 - 71.

73. Plaintiff VIS is the assignee of the '443 patent, entitled "System and Method for Providing Locally Applicable Internet Content with Secure Action Requests and Item Condition Alerts," and holds all substantial rights in the same. Among other rights, Plaintiff VIS maintains the exclusive right to exclude others, the exclusive right to enforce, sue and recover damages for past and future infringements, and the exclusive right to settle any claims of infringement.

74. The identified claims of the '443 patent are valid, enforceable and were duly issued in full compliance with Title 35 of the United States Code.

DIRECT INFRINGEMENT (35 U.S.C. § 271(a))

75. Amazon has directly infringed, and continues to directly infringe, one or more claims of the '443 patent in this judicial district and elsewhere in Virginia and the United States.

76. In particular, Amazon has directly infringed, and continues to directly infringe at least one or more of claims 1, 29, and 38 and certain dependents thereof of the '443 patent by, among other things, making, using, offering for sale, selling, and/or importing the Amazon Dash Products including Amazon Dash Button and Amazon Dash Replenishment, and all reasonably similar products of Amazon.

INDIRECT INFRINGEMENT (INDUCEMENT - 35 U.S.C. § 271(b))

77. Based on the information presently available to VIS, VIS contends that Amazon has indirectly infringed, and continues to indirectly infringe, at least one or more claims of the '443 patent by inducing direct infringement by third parties, including without limitation end users of the products accused of infringing the '443 patent ("the '443 Accused Products"), in this District and elsewhere in the United States.

78. On information and belief, despite having knowledge of the '443 patent, Amazon has specifically intended for persons who acquire and use the '443 Accused Products, including without limitation end-users of the '443 Accused Products, to acquire and use such devices in such a way that infringes at least independent claims 1, 29, and 38 and certain dependents thereof of the '443 patent and Amazon knew or should have known that their actions were inducing infringement.

79. Defendant has had knowledge of the '443 patent and the infringing nature of their activities at least as early the date when VIS effected service of the Complaint.

80. Indirect infringement is the result of activities performed by third parties in relation to the '443 Accused Products, including without limitation by end users enabled and encouraged by Amazon to use the '443 Accused Products in their normal, customary way to infringe the '443 patent.

81. With knowledge of the '443 patent, Amazon directs and aids third parties, including without limitation end-users of the '443 Accused Products, to infringe the '443 patent by, among other things, (i) enabling a user of the '443 Accused Products to wirelessly transmit a signal in connection with initiation of a household inventory replenishment for corresponding merchandise, as claimed in the '443 patent; (ii) providing instructions (including, by way of

example, the tutorials, user guides, product guides, help library, and other documentation) to end-users of the '443 Accused Products for using the products in their customary way; (iii) advertising the '443 Accused Products; and (iv) providing to third parties the products and software and related equipment that may be required for or associated with infringement of the '443 patent, all with knowledge that the induced acts constitute patent infringement. Amazon possesses specific intent to encourage infringement by third parties, including without limitation end-users of the '443 Accused Products.

INDIRECT INFRINGEMENT (CONTRIBUTION - 35 U.S.C. §§ 271(c) and/or (f))

82. Based on the information presently available to VIS, VIS contends that Amazon has indirectly infringed, and continues to indirectly infringe at least one or more of independent claims 1, 29, and 38 and certain dependents thereof of the '443 patent by contributing to the infringement of the '443 patent under 35 U.S.C. § 271(c) and/or 271(f), either literally and/or under the doctrine of equivalents, by selling, offering for sale, and/or importing into the United States, the '443 Accused Products.

83. The '443 Accused Products are capable of wirelessly transmitting a signal in connection with initiation of a household inventory replenishment of corresponding merchandise. Amazon knows that the '443 Accused Products (i) constitute a material part of the inventions claimed in the '443 patent; (ii) are especially made or adapted to infringe the '443 patent; (iii) are not staple articles or commodities of commerce suitable for non-infringing use; and (iv) are components used for or in systems that wirelessly transmit a signal in connection with replenishment of a household inventory of corresponding merchandise, as claimed in the '443 patent.

84. VIS is informed and believes that Amazon intends to and will continue to directly

and indirectly infringe the '443 patent. VIS has been damaged as a result of Amazon's infringing conduct described in this Count. Amazon is, thus, liable to VIS in an amount that adequately compensates VIS for its infringement, which, by law, cannot be less than a reasonable royalty, together with interest and costs as fixed by this Court under 35 U.S.C. § 284.

VII. JURY DEMAND

85. Plaintiff VIS demands a trial by jury of all matters to which it is entitled to trial by jury, pursuant to Fed. R. Civ. P. 38.

VIII. PRAYER FOR RELIEF

WHEREFORE, plaintiff Virginia Innovation Sciences, Inc. prays for judgment and seeks relief against Amazon as follows:

- a. Judgment that one or more claims of the Asserted Patents have been infringed, either literally and/or under the doctrine of equivalents, by Amazon;
- b. Award Plaintiff past and future damages together with prejudgment and post-judgment interest to compensate for the infringement by Amazon of the Asserted Patents in accordance with 35 U.S.C. §284; and
- c. That Plaintiff be granted such other and further relief as the Court may deem just and proper under the circumstances.

Dated: August 8, 2017

Respectfully submitted,

By: /s/ William E. Bradley

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